LABORATORY REFERENCE MANUAL
INTRODUCTION

This manual is provided as a guide to correct, timely and cost-effective use of laboratory services. We welcome your comments regarding the format and information provided in this manual.

A. General Information Concerning Laboratory Test Orders

1. If you are in doubt as to what test(s) are ordered, or cannot find the test listed in this manual, please call the ordering physician for clarification of the order.

2. Notify Phlebotomy of stat orders immediately after placing the order in the Hospital IS system.

B. Test Ordering Priorities

The following table defines the specimen collection and analysis schedules for the test ordering priorities available from the laboratory:

	Unit	Collection Time	Tests Run
Routine AM (E) **(Early Morning)**	Test request routine AM - 0400. Do not put start time in.	AM pickup	Next scheduled run
Routine (R) **(Today, Next Round)**	Test request at least 25 minutes before upcoming round. Enter non-specified time if collection time is flexible	Next scheduled round--0800 to 2000	Collection day or next scheduled run.
ASAP (A) **(As soon as possible)**	Test request immediately - non-specified time.	15 - 45 minutes	ASAP, if on 24 hr list -
Timed (T) **(Real time)**	Specify Time	Within 15 minutes of specified time	ASAP, if on 24 hr list - or next scheduled run.
STAT (S) **(Life threatening)**	Test request immediately. Call Phlebotomy, 7-7920	Within 15 minutes	Immediately, if on 24 hr list - or next scheduled run.
Will Call (W)	Specimen will be collected when indicated by unit. Call Phlebotomy, 16690.		
Non-Lab Collected (X)	This priority is used only for specimens that are collected by unit personnel.		

C. Guidelines for Collecting/Submitting Body Fluid Specimens (Other than CSF, Blood or Urine)

A fresh specimen is the preferred specimen for all laboratory tests. The collection does not have to be completed before a portion is sent to the laboratory for testing.

1. Cytology testing is the only testing for which an entire bag or bottle **must** be submitted. Send one bag/bottle of the collection to the Cytology lab as soon as it is available. (Do not aliquot from this bag/bottle for other tests and do not send more than one bag/bottle per collection for Cytology testing).

2. Submit an **aliquot** from the bag/bottle for all other test requests. **Do not** send the entire bag/bottle or the entire collection. (Volume is not usually reported on specimens other than urine.) To remove an aliquot from a bag/bottle:

    a. Mix the fluid in the bag/bottle by repeated inversion to assure an even distribution of cells and microorganisms.

    b. Observe the fluid for the presence of clots. Note the presence of clots on the request form or as a comment in the computer.

    c. Swab the outlet port with Betadine and allow to air dry to assure that fluid can be withdrawn aseptically.

    d. Withdraw fluid with a large syringe using a large bore needle. Required fluid volumes are as follows:

        1) Cultures - 2-20 mL.
        2) Cell Count and Differential - 5 mL.
        3) pH - 5 mL (Submit in a separate syringe without air bubbles. Remove needle and cap firmly with syringe cap. Send to lab immediately on ice or cold pack).
        4) Chemistry tests - 10-15 mL total fluid volume for all routine tests, i.e., glucose, amylase, total protein, LDH.

3. Replace syringe needle with a sterile syringe cap. The Laboratory WILL NOT accept specimens in syringes with needle attached. Press firmly to avoid leakage.

4. Label syringe with patient's full name and location (preferred label is an addressograph stamped label).

5. Indicate source of fluid or fluid type as well as date and time of collection on the request form or collection ticket.

6. Transport specimen to the laboratory within one hour of collection time unless otherwise noted.

D. Specimen Labeling

From the standpoint of patient safety and quality health-care, it is imperative that testing be performed only on completely identified specimens. Consequently, the minimum amount of information that must be provided on the label attached directly to the body of the specimen container (not on the lid) includes:

1. patient's full name,
2. patient's medical history number,
3. patient's date of birth
4. date specimen was obtained, and
5. time specimen was obtained.

If items #4 and 5 are not included on non-lab collected specimen labels, they must appear on the request form/collection ticket that accompanies the specimen.

All five informational items must be on all blood specimens used for Transfusion Service testing. In addition, the phlebotomist's initials must be added to the label. The phlebotomist must be either a St. Joseph's Hospital or Marshfield Laboratories employee.

Any specimen other than the easily identifiable blood, urine, CSF or stool specimen must have the source and/or type, i.e. throat, etc., written on the label.

Specimens submitted on slides must have the patient's full name (last name, first, middle initial) and date specimen was obtained handwritten on the frosted area or on a label directly attached to the slide. Hematology slide labels should also include the patient's medical history number and the time the slide was prepared.

Multiple specimens submitted on surgical pathology cases must be further labeled with the specimen source/number/letter to correlate with the information on the requisition, i.e., Tissue A, etc. Transport and preservation information for specimens to be submitted for histological exam can be found in the alphabetical section of this manual, listed as "Surgical Pathology….".

All non-laboratory collected specimens must be submitted with the appropriate request form/collection ticket. The patient information listed on the request form **must match** the information on the specimen label.

E. Specimen Rejection and Redraw Policy

No misidentified or insufficiently identified specimen will be used for any Transfusion Service testing. The specimen will be redrawn.

Misidentified or insufficiently identified specimens will not be used for any other test unless the specimen cannot be recollected or the ordering provider requests that testing be done on the specimen **and** the person who originally labeled the specimen can reliably re-identify the specimen. The person re-identifying the specimen will be required to sign a Pre-Analytical Problem Report indicating that they understand that the results of testing performed on the specimen will be used for the diagnosis and treatment of the patient. An Employee Feedback form may also be filed with the appropriate manager. This follow-up procedure will enable the Quality Improvement program to highlight areas within the medical complex that are experiencing problems with specimen submission so that education and/or problem solving activities can be initiated.

Blood specimens may also need to be rejected for test analysis whenever there is reason to suspect that the test results will be compromised or inaccurate due to specimen condition. These conditions include:

1. Wrong type of specimen obtained (venous vs. arterial, etc.).
2. The presence of hemolysis, lipemia, icterus, radiographic dyes, radioisotopes, particulate matter, etc., in specimens for tests that exhibit sensitivity to these interferences.
3. Wrong collection time or collection site for test procedure.
4. Insufficient specimen to perform the test.
5. Improper amount of anticoagulant or preservative for amount of specimen.
6. Incorrect preservative or collection tube used in specimen collection.
7. Contamination of specimen during collection or processing.
8. Presence of clots in anticoagulated specimens.
9. Improper storage, handling or processing of specimen (including specimen identification and aliquoting errors).

Whenever specimen condition would appear to compromise the validity of the test results, the following will occur:

1. *Non-laboratory collected specimens*
   The laboratory section manager or designee will call the requesting physician or nursing station from which the specimen was obtained. At that time a decision will be made on whether the original specimen should be tested, a new specimen be obtained or the test request be canceled.

   a. If a compromised specimen is tested, a comment describing the specimen and the probable effect on the test result will be appended to the test report.

   b. If a new specimen is obtained, the original request will be deleted from the computer with a comment describing the situation.

2. *Laboratory collected specimens*

   a. For most routine Hospital requests, the technical section manager or designee will complete a “Redraw Request” form to notify Phlebotomy whenever a new blood specimen needs to be obtained. Any concerns that need to be addressed when obtaining the new specimen, i.e. timing, patient preparation should be noted on this form. The new specimen will be obtained on the next phlebotomy round unless the original request was “stat” in which case the second specimen will be obtained within 15 minutes of the receipt of the redraw request.

   b. Specimens should not be redrawn from neonatal, pediatric, oncology or critical care patients without first informing the attending physician or the nurse in charge of the patient of the situation.

   c. Blood specimens will not be routinely redrawn for Chemistry panels for light to moderate hemolysis or lipemia. Instead, a comment will be entered with the affected test that describes the expected effect of this interference on the reported result. The affected test should be re-ordered as a single test and a new specimen obtained whenever uncompromised results are needed.

All serum specimens will be retained by the Laboratory for at least five (5) days after testing before disposal. The length of time other specimen types are stored in the Laboratory depends upon the stability of the specimen, patient care needs and the storage space available.

F. Cancellation of Previously Ordered Laboratory Work

1. Canceling lab work that has not been performed.

    a. If the specimen has not been collected, the test should be canceled directly from the Hospital or Clinic terminal.
    b. If the specimen has already been collected, call the laboratory as soon as possible and request that the test be canceled. Do not fill out a credit form unless requested to do so by lab.

2. Canceling lab work that has already been performed.

    a. *Hospital Patients*: If a physician wishes to cancel and credit verified laboratory work on a Hospital patient, it is necessary to complete Credit Form# 85634 (Rev. 4/88) and send it to Lab Administration. Decisions on whether or not charges on performed tests can be credited for Hospital patients are made by the Hospital Accounting department.

    b. *Clinic Patients*: If a physician wishes to cancel and credit verified laboratory work on a Clinic patient, it is necessary to call Lab Accounting (ext. 16318). The following information will be requested; patient's full name and MHN, test to be credited, date and time specimen was drawn, name of physician requesting the cancellation/credit, reason for credit and the name of a contact person familiar with the situation. Approved cancellation/credits will be sent to Clinic Charge Control for billing adjustment.

G. Laboratory Test Turnaround Time

1. The analytical performance schedule for each test performed at Marshfield Laboratories is included in the "Alphabetical Listing of Tests" section of this manual.

    a. In general, tests ordered as any priority other than "Stat" will be reported on the same day that the test is performed.

    b. Tests that are on the "24 Hour List" and are ordered as "Stat" priority will be reported within two hours after the specimen is received in the laboratory.

2. In the event that results cannot be reported in a timely manner (instrument malfunction, computer downtime, etc.) the section manager or group leader will initiate notification of all users of the delay and when results can be expected.

H. **Critical Value Notification**

Potentially life threatening test results obtained at Marshfield Laboratories will be communicated to the ordering physician (or other responsible person) as soon as possible. Calls are made during all hours depending upon when testing was completed unless physician departments (to maintain on-call provider consistency) notify the laboratory of a different notification schedule for their department members.

In compliance with JCAHO Patient Safety Standards, the laboratory will be requesting that the recipient "read back" all results to help insure the accurate transfer of the information.

I. "U-Have" Policy

Occasionally additional laboratory work will be requested following the physician's exam of the patient or after the initially requested laboratory tests are reported. The patient often can be spared an additional phlebotomy as all "extra" serum and/or plasma obtained during a phlebotomy is stored in the Laboratory.

1. *Clinic Patients*. An "Extra" tube draw order should be placed in MARS whenever additional testing is anticipated. Five "Extra" test codes are available: Extra-Blue Tube (Coagulation); Extra-Lavender (Hematology); Extra-Red Tube (Serum); Extra-Red Tube x 2 (Serum). Generally speaking, requests for "U-Have" tests should be placed in MARS. Specimen Processing personnel continuously monitor the "U-Have" screen. They will check laboratory specimen storage for an appropriate specimen and respond to the U-Have request via the computer.

2. *Hospital Patients*. Please call Specimen Processing (ext. 16220) when additional tests are ordered to determine if an appropriate specimen for the "U-Have" request is available.

Specimen stability, timing and volume requirements will have to be met before the additional tests will be performed on the originally obtained specimen.

J. Medical Necessity

Medicare recognizes that physicians and other authorized individuals must be able to order any tests that they believe are appropriate for the treatment of their patients. However, laboratories are to make physicians aware that Medicare will only pay for tests that meet the Medicare coverage criteria as reasonable and necessary to treat or diagnosis an individual patient. Whenever testing is deemed medically necessary, but does not meet the Medicare coverage criteria, the physician must obtain a signed Advance Beneficiary Notice from the Medicare patient verifying that the patient has been advised of this information and will bear the financial responsibility for the test(s) performed.

Documentation of medical necessity—both in the patient's medical record and on the laboratory test request—is the responsibility of the ordering provider.